

REMARKS

Applicants request reconsideration and allowance of the present application in view of the foregoing amendments and the following remarks.

Claims 1, 3, and 25 are pending in the present application. Claims 1, 3, and 25 are independent claims.

Claims 1 and 25 have been amended. No new matter has been added.

Claims 1 and 25 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,387,314 (Baughman et al.). Claim 2 was rejected under 35 U.S.C. § 103 as being unpatentable over Baughman et al. in view of U.S. Patent No. 4,82,595 (Trueba et al.). All rejections are respectfully traversed.

Independent claim 1 recites, inter alia, a first trench formed at a first surface of a substrate in a first pattern having a separating distance from at least one of inlets of ink chambers and connecting portions between the adjacent ink chambers, the first surface of the substrate having the ink chambers disposed thereover and that a first trench has a depth from 5µm to 20µm.

Independent claim 25 recites, inter alia, a first trench formed at an ink chamber side of a substrate in a first pattern having a separated distance from at least one of inlets of ink chambers and connecting portions between the adjacent ink chambers and that a first trench has a depth from 5µm to 20µm.

It is to be appreciated that claims 1 and 25 have been amended to include the feature of original claim 2.

However, Applicants respectfully submit that neither Baughman et al. nor Trueba et al. teaches at least the aforementioned features. Thus, without conceding the propriety of the asserted combination, it is respectfully submitted that the asserted combination is likewise deficient.

Baughman et al. relates to the fabrication of ink fill slots in thermal ink-jet printheads utilizing chemical micromachining and discusses an arrangement including an ink fill slot 18 and an extended portion 18a. (Baughman et al., FIGS. 3 and 4).

The Office Action, in rejecting cancelled claim 2, concedes that Baughman et al. does not teach or suggest that a first trench has a depth of from 5µm to 20µm. (Office Action, page

5). Nonetheless, the Office Action contends that Trueba et al. provides the necessary teaching by stating that “[t]he height of the (ink feed) channel 10 ranges from 15-30 μm .” (Office Action, page 5, citing Trueba et al., Col. 5, lines 37-43). This contention is respectfully traversed.

Trueba et al. relates to hydraulically tuned channel architecture and discusses a structure for controlling fluid refilling of firing chambers in a print head. The print head includes an ink feed channel 10, a resistor 12 at end 10a of the ink feed channel, and an associated nozzle 16 located above the resistor in a nozzle plate 18. (Trueba et al., Col. 4, lines 58-66; FIGS. 3A and 3B). In operation, the resistor heats ink proximate thereto and ink is ejected through the nozzle. (Trueba et al., Col. 4, lines 66-69).

However, the channel 10 of Trueba et al. does not meet the features of independent claims 1 and 25. Indeed, the channel 10 functions like an ink chamber rather than as the first trench of independent claims 1 and 25. In other words, the recited first trench does not correspond to the channel 10 of Trueba et al. Thus, the combination of Baughman et al. and Trueba et al. fails to teach or suggest all of the features of independent claims 1 and 25.

Accordingly, favorable reconsideration and withdrawal of the rejection of independent claims 1 and 25 are respectfully requested.

In view of the foregoing, Applicants respectfully submit that the independent claims patentably define the present invention over the citations of record. Further, the dependent claims should also be allowable for the same reasons as their respective base claims and further due to the additional features that they recite. Separate and individual consideration of the dependent claims is respectfully requested.

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Official Action. However, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to such matters.

There being no further outstanding objections or rejections, it is submitted that the present application is in condition for allowance. An early action to that effect is courteously solicited.

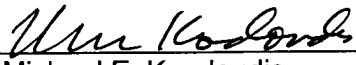
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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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